



Chandler • Arizona
Where Values Make The Difference

Civil Engineering On-Lot Retention Policy

Items required for submittal with building permit applications where single-family residential lots are subject to on-lot retention include:

1. Two sets of Grading and Drainage Plans for each lot; both sets with original seal and signature from a registered civil engineer. Make sure to show elevations on property corners (outfall included), bottom retention basin elevation, HWE, finish floor and pad elevations.
2. Calculations for weighted "C" coefficients:
 - 0.95 for roof areas, concrete and pavement
 - 0.95 for adjacent half street
 - 0.95 for future pool (min 750 sf) not to be used as retention
 - 0.50 for landscaping, unless a landscaping plan is submitted with application, then use 0.20 for grass and 0.50 for desert landscape
 - (Use calculated weighted C value or 0.65, which ever is greater.)
3. Calculations demonstrating required retention volume for subject property and the adjacent half street. $V_{\text{required}} = CIA * 1.1$: where V=volume, C=coefficient calculated above, I(intensity)=2.2in/hr, A(sf)=total area (lot + half street) and 1.1 is an additional 10% required for sedimentation. All basins must be connected (6" minimum equalization pipe) or provide separate calculations for each basin.
4. Calculations demonstrating provided retention volume:
 - $V_{\text{proposed}} = [(area\ of\ the\ top) + (area\ of\ the\ bottom)] / 2 * depth\ of\ ponding$
 - 1' depth preferred, 1.5' depth max
 - No underground storage of any kind permitted.
5. A original as-built plan and calculations, certified by a registered civil engineer, will be required prior to utility clearance.
6. Any changes to the single-family lot (including a pool) will require a revised submittal and all the above listed requirements will apply.
7. Completed Water Retention Addendum acknowledging on-lot retention requirements (see attached).



Civil Engineering On-Lot Retention Policy Water Retention Addendum

Your Company's Name

Water Retention Addendum

Buyer: _____

Date: _____

Subdivision: _____

Contract Date: _____

Lot Number: _____

Plan/Permit No: _____

Buyer acknowledges that they have been informed that lots within the community of _____ have been designed to retain surface water run-off in the depressed areas. The grading of each lot has been specifically engineered to accommodate certain areas for pool decking, as well as specific amounts of on-site water storage capacity.

Buyer acknowledges that their individual pool and landscaping design **will** require additional engineering or grading costs that will be their responsibility. Buyer further agrees that they will use the lot in a manner that does not interfere with or impede in any way each lots ability to meet the on-site retention requirement as established by the City of Chandler.

Buyers' Signature: _____ Date: _____

Buyers' Signature: _____ Date: _____

Sales Signature: _____ Date: _____